

Date: Monday, 1/30/2006 3:43:48 PM  
 User: Kim Johnston

## Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services		Drawing Name	: X-TUBE EXTRUSION OH-58		
Job Number	: 25665					
Estimate Number	: 10005					
P.O. Number	: N/A			Part Number	: D6005128	
This Issue	: 1/30/2006		S.O. No.	: N/A		
Prsht Rev.	: NC			Drawing Number	: D6005 REV A	
First Issue	: N/A		Type	: LANDING GEAR		
Previous Run	: 23969			Project Number	: N/A	
Written By	: <i>Steph</i> <i>Comment Below</i>			Drawing Revision	: A	
Checked & Approved By	: <i>JK</i> <i>06/01/30</i>			Material	: N/A	
Comment	: Est Rev:C 04.06.15 Added tolerance to Step 2			Due Date	: 6/1/2006	
				Qty:	20	
				Um:	Each	

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	PG	PURCHASING
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Comment: PURCHASING

Issue P/O: *00000505**AP 06/01/02*

- a) Order as per Dwg D6005
- b) Material: 2.750 x 0.375 wall 7075-T6/T6511 (WW-T-700/7 or QQ-A-225/9 or QQ-A-200/11) seamless aluminum tube
- c) Minimum ultimate tensile strength = 77 ksi
- d) Minimum tensile yield strength = 66 ksi
- e) Tolerance are per ASTM B210 (see details on Dwg D6005)
- f) Material certification required

2.0	PACKAGING 1	PACKAGING RESOURCE #1
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Comment: PACKAGING RESOURCE #1

Receive &amp; Inspect For Transit Damage

Ensure material certification is attached

*C206128106**22*

3.0	QC6	DIMENSIONAL CHECK
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Comment: DIMENSIONAL CHECK

Ensure Material certification comply to Dwg D6005

*MS 06/06/30**22*

4.0	HAND FINISHING1	HAND FINISHING RESOURCE #1
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Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

*W*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes  No  DQA:  Date: 06/07/04  
QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 1/30/2006 3:43:48 PM  
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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: X-TUBE EXTRUSION OH-58

Job Number: 25665

Part Number: D6005128

Job Number:



Seq. #: Machine Or Operation:

Description :

5.0 QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



W N/A



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

6.0 PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location:       

gml 06/06/04

7.0 DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

22  
D 06/07/04

Job Completion



W 06-07-04

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

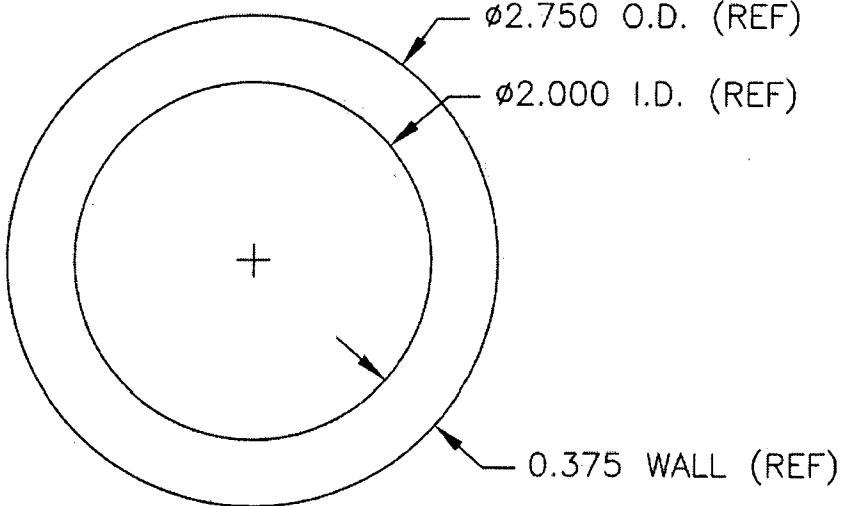
NOTE: Date & initial all entries



DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D6005
DATE		REV. A SHEET 1 OF 1
00.11.17		SCALE 1:1
A	00.11.17	NEW ISSUE

## SPECIFICATION CONTROL DRAWING

**RELEASED**  
00.11.24 *CP*



### NOTES

- 1) D6005-XXX CROSSTUBE

LENGTH

WHERE XXX IS LENGTH IN INCHES  
EG. 128" LONG TUBE: D6005-128

- 2) MATERIAL: 2.750 OD x 0.375 WALL 7075-T6/T6511 (WW-T-700/7 OR QQ-A-225/9 OR QQ-A-200/11) SEAMLESS ALUMINUM TUBE.  
MINIMUM ULTIMATE TENSILE STRENGTH = 77 ksi  
MINIMUM YIELD TENSILE STRENGTH = 66 ksi
- 3) TOLERANCES ARE PER ASTM B210 AS FOLLOWS:  
O.D.:  $\pm 0.006$  MEAN ( $\pm 0.012$  INCLUDING OVALITY)  
WALL:  $\pm 0.015$  MEAN ( $\pm 0.038$  INCLUDING ECCENTRICITY)  
LENGTH: XXX  $+0.125/-0.000$   
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH
- 4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

SHOP COPY  
RETURN 225/9 OR  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 25665

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Abnahmeprüfzeugnis 3.1 - EN 10204:2004

Inspection Certificate 3.1 - EN 10204:2004 / Certificat de Reception 3.1- EN 10204:2004

**Kunde:** Dart Aerospace Ltd.

*Client:*

1270 Aberdeen Street  
K6A1K7 Hawkesbury, ON Canada

**Zeugnisnummer:** 419/06

*Cert No.: / No. du certificat:*

**Bestellnummer:** PO00000505

*Order No. / No. de commande*

**Produkt:** Rohre nahtlos gepresst

*Product / Produit:* Tubes seamless extruded

**Auftrag:** 17486/5

*Our Reference/Notre Reference:*

**Spezifikation:** -; AMS - QQ - A - 200/11E; -; -; Spezifikation Dart Aerospace 6005

*Specification:*

**Werkstoff:** 7075

*Alloy/Alliage:*

**Zustand:** T 6511

*Temper/État*

**Abmessung**

*Size / Dimension*

2,750 INCH x 2,000 INCH x 0,375 INCH x 128,000 INCH

D6005-128 2.750 x 0.375 x 128

**Kennzeichnung** ALUnna-Cert No.419/06-7075-T6511-Cast No.79923-QQA200/11E-2.750" OD X 0.375"Wall-Heat No.447/05-

*Marking/Marquage:* Lot17486/5-1-P.O.00000505

**Lieferung**

*Delivered Material / Matériel délivré:*

pcs. lbs

22 800

## 1. Chemische Analyse

## Chemical Analysis / analyse chimique

Charge/ Cast No.	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Zr	Bi	Sn	Ni
	min.			1,2	2,1	0,18	5,1						
	0,40	0,50	2,0	0,30	2,9	0,28	6,1	0,20					
79923	0,151	0,193	1,42	0,055	2,47	0,188	5,73	0,035	0,006	0,018	0,001	0,001	0,006

Elements without indication < 0,01 %

## 2. Mechanische Eigenschaften

## Mechanical Properties / Valeurs Mécaniques

Anforderungen Requirements	tensile (Rm) ksi	yield (Rp0,2) ksi	elongation 2" %	elongation A %	Hardness HB	Heat No.
	min. max.	77,0	66,0			
1	86,710	80,475	9,0		171	447/05 - 22 pcs.
2	86,420	80,040	8,0		167	

**Ergebnis der  
Prüfungen:** Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht

*Test results:* We confirm that the delivery has been tested and applies to the agreements made on receipt of the order

*Resultats:* Nous confirmons que la livraison a été contrôlée et correspond avec les conventions faites à la réception de la commande